

**LIQUID CONTACTING OF POST-QUENCH EFFLUENT VAPOR
STREAMS FROM OXYGENATE TO OLEFINS CONVERSION TO
CAPTURE CATALYST FINES**

ABSTRACT

A process is provided for converting oxygenate to olefins from a fluidized bed reactor which comprises removal of catalyst fines from a quenched vaporous effluent by contacting with a liquid low in catalyst fines content, e.g., oxygenate feedstock, or by-product water from the oxygenates to olefins conversion which is stripped and/or filtered. The process typically comprises: contacting a feedstock comprising oxygenate with a catalyst comprising a molecular sieve under conditions effective to produce a deactivated catalyst having carbonaceous deposits and a product comprising the olefins; separating the deactivated catalyst from the product to provide a separated vaporous product which contains catalyst fines; quenching the separated vaporous product with a liquid medium containing water and catalyst fines, in an amount sufficient for forming a light product fraction comprising light olefins and catalyst fines and a heavy product fraction comprising water, heavier hydrocarbons and catalyst fines; treating the light product fraction by contacting with a liquid substantially free of catalyst fines to provide a light product fraction having reduced catalyst fines content and a liquid fraction of increased fines content; compressing the light product fraction having reduced catalyst fines content; and recovering the light olefins from the compressed light product fraction.